

REMARKS

I. Amendments

Claim 1 is amended by incorporating limitations from dependent claims 2 and 4 into claim 1. Independent claim 1 now requires the monolith to be a ceramic monolith impregnated with a catalytic metal selected from either nickel, or cobalt, or molybdenum, which has flow paths oriented so as to direct heat towards the center of the tube containing the monolith.

Claims 2 –4 are canceled.

New claims 6 – 23 are added to the specification. Claims 6, 10 and 17 are independent claims. Claim 6 and claims 7 – 8 depending therefrom are directed specifically to a dehydrogenation process. Claims 10 and 17 are directed to processes that use a tube reactor containing a monolith having a structure that provides for directing heat flow either toward the center of the tube reactor or away from the center of the tube reactor.

Claim 5 has been amended to place it in independent form and to incorporate essentially the same limitations as are now incorporated in claim 1 except that the catalytic metal is silver.

II. § 112 Rejection of claim 4

This rejection is rendered moot by the cancellation of claim 4.

III. § 102(b) Rejection of claims 1, 2, 4, and 5

The Examiner has rejected claims 1, 2, 4, and 5 as being anticipated by the Lachman et al patent (U. S. 4,912,077).

In view of the amendments to the claims, it respectfully submitted that this rejection is now rendered moot. Claims 2, 3 and 4 have been canceled with most of the limitations therein incorporated into claim 1. Many of these same limitations are incorporated into claim 5. Both claims 1 and 5 require the monolith to define a flow path oriented so as to direct heat away from the center of the reactor tube. The Lachman et al patent does not teach such a structure.

In view of the above, Applicant respectfully requests the withdrawal of the § 102(b) rejection.

IV. § 103(a) rejection of claim 3

This rejection is rendered moot as a result of the cancellation of claim 3.

V. New claims 6 – 23

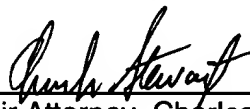
It is respectfully submitted that new claims 6-23 are patentably distinct over the references cited by the Examiner. For instance, the references do not teach the use of a monolith for the direction of heat flow through a reactor tube in order to equalize a temperature profile across the reactor tube. There are also many other significant distinctions.

VI. Conclusion

In view of the above, Applicant respectfully requests early allowance of claims 1, 5, and 6-23.

Respectfully submitted,

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